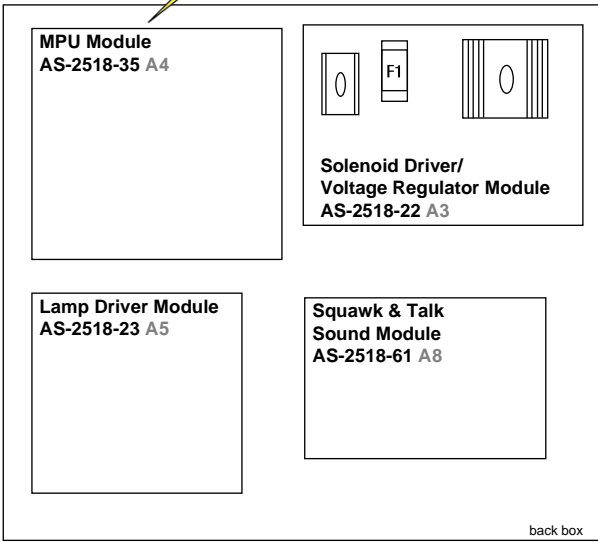
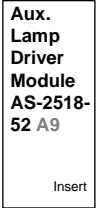
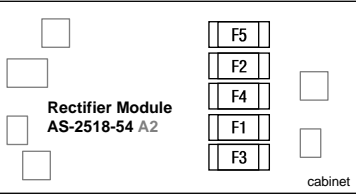




Fuse List

Rectifier Module AS-2518-54		
F1	6.5V Switched illumination	20A, 250V
F2	230V Display power input	0.75A, 250V
F3	5V Unregulated input	4A, 250V
F4	43V Solenoids (3 flippers)	6A, 250V
F5	6.5V General illumination	20A, 250V
Sol. Dr./Volt. Reg. AS-2518-22		
F1	190V Display power output	0.25A, 250V
Under the Playfield fuses		
F1	Solenoids	1A, 250V, SB
Transformer Module		
F1	Main fuse	3A, 250V, SB
F2	Strobe transformer fuse	1A, 250V, SB



Controlled Lamps Chart

SCR	connector	lamp description	code	wire color	tr type	SCR	connector	lamp description	code	wire color	tr type
Q12	A9J2-17	15 Second Clock Multiplier 2X	43	Grn-Yel	MCR-106	Q06	A5J2-14	Outlane Special (Right)	12	Red-Blu	2N5060
Q05	A9J2-9	15 Second Clock Multiplier 3X	54	Wht-Grn	MCR-106	Q02	A5J1-25	Right Side Lower Target	75	Orn-Wht	MCR-106
Q04	A5J1-28	3-Drop Target Arrow #1	78	Orn-Blk	2N5060	Q46	A5J3-18	Right Side Upper Target	56	Wht-Brn	2N5060
Q25	A5J1-6	3-Drop Target Arrow #2	25	Blu-Wht	2N5060	Q31	A5J2-2	Rollover Button Lower Top Right	20	Blu	2N5060
Q20	A5J1-13	3-Drop Target Arrow #3	96	Gry-Brn	2N5060	Q01	A9J2-7	Rollover Button Upper Top Right	10	Red	MCR-106
Q58	A5J3-2	3-Drop Target Bonus Multiplier 4X	95	Gry-Wht	2N5060	Q22	A9J3-15	Rollover Button Shooter Alley (Lower)	14	Red-Grn	MCR-106
Q01	A5J1-24	4-Drop Target "A" (Bottom)	50	Wht	MCR-106	Q15	A9J3-8	Rollover Button Shooter Alley (Middle)	13	Red-Yel	MCR-106
Q24	A5J1-5	4-Drop Target "B"	48	Grn-Blk	MCR-106	Q08	A9J2-14	Rollover Button Shooter Alley (Top)	12	Red-Blu	MCR-106
Q42	A5J3-21	4-Drop Target "C"	30	Yel	MCR-106	Q03	A5J2-21	Same Player Shoot Again (Back Box)	47	Grn-Orn	MCR-106
Q56	A5J3-10	4-Drop Target "D" (Top)	91	Gry-Red	MCR-106	Q40	A5J3-22	Same Player Shoot Again (Playfield)	23	Blu-Yel	MCR-106
Q53	A5J3-14	4-Drop Target Bonus Multiplier 5X	84	Blk-Grn	2N5060	Q07	A5J1-27	Saucer 10K	53	Wht-Yel	2N5060
Q25	A9J3-18	Back Box Strobe	72	Orn-Blu	MCR-106	Q21	A5J1-12	Saucer 20K	61	Brn-Red	2N5060
Q16	A5J2-22	Ball-in-Play (Back Box)	62	Brn-Blu	MCR-106	Q30	A5J2-6	Saucer 30K	85	Blk-Wht	2N5060
Q11	A5J1-16	Bonus Multiplier 2X	90	Gry	2N5060	Q26	A9J3-17	Saucer Arrow 2X	15	Red-Wht	MCR-106
Q26	A5J1-7	Bonus Multiplier 3X	34	Yel-Grn	2N5060	Q19	A9J3-10	Saucer Arrow 3X	25	Blu-Wht	MCR-106
Q32	A5J3-27	Bonus Multiplier 4X	40	Grn	2N5060	Q39	A5J3-24	Saucer Extra Ball	72	Orn-Blu	2N5060
Q59	A5J3-4	Bonus Multiplier 5X	14	Red-Grn	2N5060	Q51	A5J3-15	Spinner Left	53	Wht-Yel	2N5060
Q52	A5J3-13	Credit Indicator	35	Yel-Wht	2N5060	Q44	A5J3-19	Spinner Right	67	Brn-Orn	2N5060
Q04	A9J2-10	Face of Ming	80	Blk	MCR-106	Q08	A5J1-23	Super Bonus 1K	12	Red-Blu	MCR-106
Q11	A9J2-18	Face of Ming	57	Wht-Orn	MCR-106	Q35	A5J1-3	Super Bonus 2K	45	Grn-Wht	MCR-106
Q02	A9J2-4	Flash Gordon 1	15	Red-Wht	MCR-106	Q49	A5J3-17	Super Bonus 3K	13	Red-Yel	MCR-106
Q09	A9J2-11	Flash Gordon 2	18	Red-Blk	MCR-106	Q54	A5J3-11	Super Bonus 4K	20	Blu	MCR-106
Q16	A9J3-3	Flash Gordon 3	20	Blu	MCR-106	Q09	A5J1-14	Super Bonus 5K	54	Wht-Grn	MCR-106
Q03	A9J2-8	Flash Gordon 4	51	Wht-Red	MCR-106	Q34	A5J1-2	Super Bonus 6K	52	Wht-Blu	MCR-106
Q10	A9J2-15	Flash Gordon 5	52	Wht-Blu	MCR-106	Q48	A5J3-16	Super Bonus 7K	25	Blu-Wht	MCR-106
Q17	A9J3-9	Flash Gordon 6	53	Wht-Grn	MCR-106	Q55	A5J3-9	Super Bonus 8K	15	Red-Wht	MCR-106
Q41	A5J3-20	Flipper Feed Lane (Left Inlane)	64	Brn-Grn	MCR-106	Q10	A5J1-15	Super Bonus 9K	13	Red-Yel	MCR-106
Q17	A5J1-11	Flipper Feed Lane (Right Inlane)	65	Brn-Wht	MCR-106	Q22	A5J1-10	Super Bonus 10K	23	Blu-Yel	MCR-106
Q33	A5J2-11	Game Over (Back Box)	95	Gry-Wht	MCR-106	Q60	A5J3-3	Super Bonus 100K	81	Blk-Red	2N5060
Q15	A5J2-23	High Score to Date (Back Box)	97	Gry-Orn	MCR-106	Q05	A5J2-16	Thumper Bumper (Top)	34	Yel-Grn	2N5060
Q18	A5J2-20	Inline Drop Target Extra Ball	98	Gry-Blk	2N5060	Q47	A5J2-10	Tilt (Back Box)	35	Yel-Wht	MCR-106
Q23	A5J2-8	Match (Back Box)	70	Orn	MCR-106	Q43	A5J2-7	Top Target Collect Bonus	91	Gry-Red	2N5060
Q14	A5J1-18	Mini Bonus 1K	58	Wht-Blk	2N5060	Q45	A5J2-1	Top Target Special	60	Brn	2N5060
Q29	A5J1-1	Mini Bonus 2K	41	Grn-Red	2N5060	Q06	A9J2-6		45	Grn-Wht	MCR-106
Q36	A5J3-26	Mini Bonus 3K	43	Grn-Yel	2N5060	Q07	A9J2-5		60	Brn	MCR-106
Q57	A5J3-1	Mini Bonus 4K	10	Red	2N5060	Q13	A9J2-13		40	Grn	MCR-106
Q12	A5J1-19	Mini Bonus 5K	60	Brn	2N5060	Q14	A9J2-12		62	Brn-Blu	MCR-106
Q27	A5J1-9	Mini Bonus 6K	43	Grn-Yel	2N5060	Q18	A9J3-11		70	Orn	MCR-106
Q38	A5J3-25	Mini Bonus 7K	36	Yel-Brn	2N5060	Q20	A9J3-7		82	Blk-Blu	MCR-106
Q50	A5J3-12	Mini Bonus 8K	21	Blu-Red	2N5060	Q21	A9J3-4		95	Gry-Wht	MCR-106
Q13	A5J1-17	Mini Bonus 9K	57	Wht-Orn	2N5060	Q23	A9J3-12		21	Blu-Red	MCR-106
Q28	A5J1-8	Mini Bonus 10K	51	Wht-Red	2N5060	Q24	A9J3-16		56	Wht-Brn	MCR-106
Q37	A5J3-23	Mini Bonus 50K	98	Gry-Blk	2N5060	Q27	A9J3-14		26	Blu-Grn	MCR-106
Q19	A5J2-15	Outlane Special (Left)	23	Blu-Yel	2N5060	Q28	A9J3-13		96	Gry-Brn	MCR-106

A9 = Aux. Lamp Driver Board AS-2518-52

Coil Table

Sol. No	Solenoid description	Solenoid Type	Wire Code	Wire Color	Connector	Driver Transistor	Solenoid Coil Type
1	Outhole Kicker	Momentary	95	Gry-Wht	A3J1-5	Q4	AN-26-1200
2	Knocker	Momentary	85	Blk-Wht	A3J2-5, J3-7	Q3	AR-26-1200
3	Saucer Kick Down	Momentary	80	Blk	A3J2-11	Q6	AO-29-2100
4	Saucer Kick Up	Momentary	85	Blk-Wht	A3J5-10	Q8	AO-27-1300
5	Single Drop Target Reset	Momentary	80	Blk	A3J5-12	Q13	AO-27-1300
6	4 Drop Target Reset	Momentary	67	Brn-Orn	A3J1-3, J2-4	Q2	NO-26-1900
7	3 Drop Target Reset	Momentary	18	Red-Blk	A3J1-2, J2-9	Q1	NO-26-1900
8	Inline Drop Target Reset	Momentary	81	Blk-Red	A3J2-10	Q5	NO-26-1900
9	Thumper Bumper Left	Momentary	78	Orn-Blk	A3J5-11	Q14	AN-26-1200
10	Thumper Bumper Right	Momentary	71	Orn-Red	A3J5-9	Q9	AN-26-1200
11	Single Drop Target Pull Down	Momentary	74	Orn-Grn	A3J5-15	Q10	CE-31-2000
12	Thumper Bumper Top	Momentary	67	Brn-Orn	A3J5-13	Q12	AN-26-1200
13	Left Slingshot	Momentary	83	Blk-Yel	A3J5-14	Q11	AN-26-1200
14	Right Slingshot	Momentary	18	Red-Blk	A3J5-8, J2-6, J3-7,	Q16	AN-26-1200
15	Coin Lockout	Continuous	36	Yel-Brn	A3J2-8	Q19	FO-36-7000
16	Flipper enabling relay	Continuous	--	--	--	Q15	48V Relay
		Momentary	81	Blk-Red	A3J2-12	Q7	
		Continuous	81	Blk-Red	A3J5-7	Q17	
		Continuous	80	Blk	A3J5-3, J2-15, J3-9	Q18	
Flipper Circuits		Power Wire	Flipper Coil Wire		Flipper Button Wire		Coil
Left Flipper		60 (Brn)	40 (Grn)	A3J1-8	20 (Blu)	A3J2-2	AQ-25-500/34-4500
Right Flipper		60 (Brn)	70 (Orn)	A3J1-9	10 (Red)	A3J2-1	AQ-25-500/34-4500
Upper Right Flipper		60 (Brn)	85 (Blk-Wht)		(to lower right flipper)		AQ-26-600/34-4500

Switch Matrix

		strobe (ST) ———— return (I)				
Row	Column	STROBE 0 A4J2-1 Wht-Red (51) A4J3-2 Red-Yel (13)	STROBE 1 A4J2-2 Orn (70) A4J3-3 Red-Grn (14)	STROBE 2 A4J2-3 Gry-Yel (93)	STROBE 3 A4J2-4 Wht-Yel (53)	STROBE 4 A4J2-5 Yel-Red (31)
RETURN I 0 A4J2-8 Wht-Grn (54) A4J3-9 Red-Wht (15)		2 Left & Right Rollover Button 1	Coin Chute III (Right) 9	4-Drop Target "A" (Bottom) 17	1st Inline Drop Target 25	Right Spinner 33
RETURN I 1 A4J2-9 Brn-Yel (63) A4J3-10 Brn-Wht (65)		3 Shooter Lane Rollover Button 2	Coin Chute I (Left) 10	4-Drop Target "B" 18	2nd Inline Drop Target 26	Left Spinner 34
RETURN I 2 A4J2-10 Wht-Orn (57) A4J3-11 Blu (20)		Top Single Drop Target 3	Coin Chute II (Middle) 11	4-Drop Target "C" 19	3rd Inline Drop Target 27	Right Slingshot 35
RETURN I 3 A4J2-11 Orn-Blk (78) A4J3-12 Blu-Red (21)		Shooter Lane Rollover 4	Lower Right Side Target 12	4-Drop Target "D" (Top) 20	Inline Back Target 28	Left Slingshot 36
RETURN I 4 A4J2-12 Brn (60) A4J3-13 Blu-Yel (23)		Drop Target 50 Point Rebound (2) 5	Flipper Feed Lane (Right Return Lane) 13	1 Drop Target (Top) 21	10 Point Rebound (2) 29	Top Thumper Bumper 37
RETURN I 5 A4J2-13 Wht-Brn (56) A4J3-14 Blu-Wht (25)		Credit Button 6	Flipper Feed Lane (Left Return Lane) 14	2 Drop Target (Middle) 22	Saucer 30	Not Used 38
RETURN I 6 A4J2-14 Brn-Wht (65) A4J3-15 Blu-Orn (27)		Tilt (3) 7	Upper Right Side Target 15	3 Drop Target (Bottom) 23	Right Outlane 31	Right Thumper Bumper 39
RETURN I 7 A4J2-15 Wht-Blu (52) A4J3-16 Yel (30)		Outhole 8	Slam (2) 16	Top Target 24	Left Outlane 32	Left Thumper Bumper 40